



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,459	07/05/2005	Mohammad Jamal El-Hibri	266280US55X PCT	3847
22850 7590 11/26/2008 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER NGUYEN, VU ANH	
			ART UNIT 1796	PAPER NUMBER
			NOTIFICATION DATE 11/26/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/525,459	Applicant(s) EL-HIBRI, MOHAMMAD JAMAL	
	Examiner Vu Nguyen	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 41,43,45,47,49,55,56,58 and 60-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 41,43,45,47,49,55, 56, 58 and 60-67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/27/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Acknowledgement is made of applicant's amendment to the claims, wherein claims 41, 43, 45, 47, 49, and 55 have been amended, claims 1-40, 42, 44, 46, 48, 50-54, 57, and 59 have been cancelled, and new claims 60-67 have been added. Claims 41, 43, 45, 47, 49, 55, 56, 58 and 60-67 are pending.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 69/405,745, filed on 08/26/2002. Acknowledgement is also made of applicant's Request for Corrected Filing Receipt filed 10/04/2005, which clarifies that the instant application is a 371 of PCT/US03/26497 filed on 08/26/2003, which is a Non-Provisional of 60/405,745 filed on 08/26/2002.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1796

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 41, 43, 45, 47, 49, 55, 56, 58 and 60-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hallden-Abberton et al. (US 5,344,868) in view of van den Berg et al. (US 6,197,898).

6. Regarding the limitations set forth in these claims, Hallden-Abberton et al. (Hallden, hereafter) teaches a method of improving impact resistance and toughness of glass-reinforced polymer composition (col. 1, lines 5-28), said method comprising blending 80-99.5 parts of a polyglutarimide with 0.5-20 parts of a phenoxy resin, and 10-50 parts of an inorganic fiber, wherein the "parts" of the polymers are based on 100 parts of the combined polymer content and the "parts" of the fiber are based on 100 parts of the total composition (Claim 1). No polyamide is mentioned. The phenoxy polymer comprises product of a copolymerization of epichlorohydrine and bisphenol A (Claim 7). In other words, the disclosed phenoxy polymer is a bisphenol phenoxy polymer and, more specifically, a 4,4'-isopropylidenediphenol phenoxy polymer because bisphenol A is a 4,4'-isopropylidenediphenol. The inorganic fiber comprises silica glass fiber (Claims 2 & 3). The disclosed method comprises melt compounding the polyglutarimide, phenoxy resin, and inorganic fiber in an extruder, extruding the blend

Art Unit: 1796

through a die orifice, cooling, pelletizing, and molding into articles such as boards for printed circuits (col. 4, lines 4-23). The molding step includes injection molding (col. 5, lines 19-20). In one embodiment, the glass fiber is supplied to the molten polymer blend just prior to extrusion into sheet or pellets (col. 4, lines 2-4). Accordingly, the polymers are fed to an extruder and blended and the glass fiber is "added by a side melt-addition feeder" (col. 4, lines 4-14). It is noted that the prior art employs Killion single-screw extruder (col. 5, lines 17-18), which is equipped with a hopper for feeding the polymers, a side feeder for feeding the glass fiber, a water bath for cooling the blend, and a pelletizer to pelletize the blend (see attached document).

7. Clearly, the prior art teaches all the limitations set forth in the claims with one exception: it fails to teach an **aromatic** polycondensation polymer having a sulfone, ketone, imide, or carbonate group.

8. van den Berg et al. (Berg, hereafter) teaches a method of preparing a glass-reinforced polymer composition comprising melt-compounding a polymer blend in an extruder, palletizing, cooling in a water bath, compounding said blend with glass fiber and molding into articles (col. 7, lines 17-26). The polymer components of the blend comprise a thermoplastic polymer and an epoxy resin (col. 4, lines 1-3). The thermoplastic polymer includes high- T_m or high- T_g **aromatic** polycarbonates, **aromatic** polysulfones, and polyethersulfones (col. 8, lines 1-10). The epoxy resin includes the condensation product of epichlorohydrine and bisphenol A (col. 8, lines 66-67). It is noted that high- T_m or high- T_g thermoplastic polymers possess superior mechanical and heat-resistance properties. However, as taught by Berg, these polymers are difficult to

Art Unit: 1796

mold and shape in view of their high processing temperature (col. 1, lines 25-31). The disclosed method enables the processing of these polymers at a temperature below their normal processing temperatures (col. 2, lines 61-63). **[Motivation]** The use of high- T_m or high- T_g thermoplastic polymers coupled with the disclosed processing method enables homogeneous compounding (col. 12, lines 64-67) and results in products with excellent mechanical and thermal properties (col. 13, lines 56-57).

9. In light of the teachings by Berg and considering that the composition taught by Hallden has a major drawback of possessing low thermal resistance (col. 5, lines 48-49; col. 6, lines 3-4 & 29-30; col. 8, lines 6-7), it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have replaced the non-aromatic polyglutarimide taught by Hallden with the high- T_m or high- T_g thermoplastic polymers taught by Berg, and employed the method of controlled blending process taught by Berg so as to increase the mechanical and thermal properties of the molded products.

Response to Arguments

10. Applicant's arguments filed 10/27/2008 have been fully considered but they are not persuasive. Applicant fails to show why Hallden and Berg are not combinable. First, applicant's allegation that Berg "in no way relates to Hallden" because Berg does not teach polyglutarimide; Berg also includes polyamide as a thermoplastic resin; and Hallden does not teach the epoxy resins that Berg teaches (p. 8, 1st paragraph). The examiner has shown clearly in the Office Actions that both Hallden and Berg are related

Art Unit: 1796

to glass-reinforced polymer compositions. The preferred epoxy resin employed by Berg is the condensation product of epichlorohydrine and bisphenol A, which is exactly the phenoxy resin employed by Hallden. The group of thermoplastic polymers taught by Berg, though containing polyamide, is very limited and it does not take long for one of ordinary skill in the art to select from that group an appropriate species suitable for a particular application. Second, applicant alleges that "[w]hat the combination of Hallden and van den Berg does teach, at best, is that the blending of polymeric materials is difficult and unpredictable." (p. 8, 2nd paragraph). The advantages of combining Hallden and Berg are obvious as set forth above. Third, applicant alleges that "[a]s shown in the several Examples and Controls present in the specification, Applicant's presently claimed method provides blends having a substantial improvement in tensile and flexural properties, as well as impact properties. In addition to the fact that the combination of references fails to suggest the basic steps of Applicant's presently claimed method, they also fail to disclose or suggest the substantial benefits provided by this method." (p. 8, 2nd paragraph). In regard to the second allegation, the basic steps set forth in the claims are taught by both Hallden and Berg as explained above. As to applicant's claim of "substantial improvement," this claim is mere allegation and unsubstantiated.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 1796

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vu Nguyen whose telephone number is (571)270-5454. The examiner can normally be reached on M-F 7:30-5:00 (Alternating Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1796

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Vu Nguyen
Examiner
Art Unit 1796

/David Wu/
Supervisory Patent Examiner, Art Unit 1796